

**CLAIMS**

1. An apparatus comprising:

a first circuit configured to generate a decoded video signal and syntax elements in response to an encoded bitstream; and

a second circuit configured to generate one or more  
5 overlay images in response to said syntax elements, wherein said one or more overlay images comprise one or more graphic symbols representing said syntax elements of said encoded bitstream.

2. The apparatus according to claim 1, wherein said one or more overlay images further comprise a graphic representation of statistics of said encoded bitstream.

3. The apparatus according to claim 2, wherein said statistics comprise one or more of image resolution, bit rate, frame rate, frame errors, peak signal to noise ratios, and average peak signal to noise ratios.

4. The apparatus according to claim 3, wherein said one or more overlays further comprise a graph of said bit rate.

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5. The apparatus according to claim 4, wherein one or more scales of said bit rate graph are dynamically adjustable.

6. The apparatus according to claim 3, wherein said one or more overlays further comprise a graph of said peak signal to noise ratio.

7. The apparatus according to claim 6, wherein one or more scales of said peak signal to noise ratio graph are dynamically adjustable.

8. The apparatus according to claim 1, wherein said one or more overlay images further comprise one or more of a main window configured to display said decoded video signal, a statistics window, a legend window and a bit value window.

9. The apparatus according to claim 1, wherein said one or more overlay images further comprise a grid representing a number of macroblocks of said decoded video signal.

10. The apparatus according to claim 9, wherein said one or more overlay images further comprise (ii) one or more graphic symbols representing one or more of a macroblock type, a submacroblock type and a prediction direction.

11. The apparatus according to claim 10, wherein said graphic symbols are color coded.

12. The apparatus according to claim 9, wherein said one or more overlay images further comprise one or more graphic symbols representing a number of bits used to encode syntax elements of each macroblock in said decoded video signal.

13. The apparatus according to claim 9, wherein said one or more overlay images further comprise one or more graphic symbols representing a relative size of each macroblock in said decoded video signal.

14. The apparatus according to claim 1, wherein said one or more overlay images further comprise graphic symbols

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representing a reference index for each macroblock in said decoded video signal.

15. The apparatus according to claim 1, wherein said one or more overlay images further comprise one or more graphic symbols representing a macroblock level adaptive frame field (MBAFF) coding parameter.

16. The apparatus according to claim 1, wherein said one or more overlay images further comprise a macroblock histogram display.

17. The apparatus according to claim 16, wherein said macroblock histogram display presents information regarding the number of block types contained in said decoded video signal.

18. The apparatus according to claim 1, further comprising a compositing circuit configured to generate a composite video signal in response to said decoded video signal and said one or more overlay images.

19. The apparatus according to claim 1, wherein said first circuit is configured to convert from a YUV format to an RGB format and upscale said decoded video signal to a desired size and aspect ratio.

20. The apparatus according to claim 18, wherein said compositing circuit is configured to store said composite decoded video signal in a picture memory of a video card.

21. The apparatus according to claim 1, wherein said encoded bitstream comprises an H.264 compliant bitstream.

22. An apparatus comprising:

means for generating a decoded video signal and syntax elements in response to encoded bitstream; and

means for generating one or more overlay images in response to said syntax elements, wherein said one or more overlay images comprise one or more graphic symbols representing said syntax elements of said encoded bitstream.

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23. A method for analyzing a decoded video signal comprising the steps of:

generating a decoded video signal and syntax elements in response to encoded bitstream; and

5 generating one or more overlay images in response to said syntax elements, wherein said one or more overlay images comprise one or more graphic symbols representing said syntax elements of said encoded bitstream.